

WHAT IS CLAIMED IS:

1. A flow rate sensor comprising:

an external structural member having a support member and a detector passage disposed at a tip end portion of said support member, a holder insertion aperture being formed in said support member so as to communicate between a base end exterior portion of said support member and said detector passage;

a holder mounted to said external structural member by being inserted into said holder insertion aperture such that an element holding portion disposed near a tip end of said holder projects into said detector passage;

a flow rate detecting element for detecting a flow rate of a fluid being measured, said flow rate detecting element being disposed on said element holding portion; and

an electronic circuit portion for controlling an excitation current flowing to said flow rate detecting element, said electronic circuit portion being electrically connected to said flow rate detecting element,

said flow rate sensor having a plug-in construction in which said external structural member is inserted into a mounting aperture that opens onto a main passage through which said fluid being measured flows so as to be positioned said detector passage in said main passage to detect said flow rate of said fluid being measured,

wherein:

an electrical connection portion between said flow rate detecting element and said electronic circuit portion is constructed on a portion of said holder positioned inside said holder insertion aperture, and

said holder is supported as a cantilever in said external structural member by fixing a base end portion of said holder to said external structural member.

2. The flow rate sensor according to Claim 1, further comprising:
 - a circuit housing portion disposed near a base end of said support member; and
 - a terminal conductor embedded in said holder such that a first end of said terminal conductor is exposed near said element holding portion and a second end projects outward at said base end,
 - wherein said flow rate detecting element being electrically connected to said first end of said terminal conductor, and said electronic circuit portion being housed in said circuit housing portion and electrically connected to said second end of said terminal conductor.
3. The flow rate sensor according to Claim 1, wherein:
 - an elastic body having vibration-damping properties is disposed between an inner wall surface of said holder insertion aperture and said holder.
4. The flow rate sensor according to Claim 3, further comprising:
 - a circuit housing portion disposed near a base end of said support member; and
 - a terminal conductor embedded in said holder such that a first end of said terminal conductor is exposed near said element holding portion and a second end projects outward at said base end,
 - wherein said flow rate detecting element being electrically connected to said first end of said terminal conductor, and said electronic circuit portion being housed in said circuit housing portion and electrically connected to said second end of said terminal conductor.